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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,743	02/13/2001	Howard E. Rhodes	303.592US1	9680

7590 11/18/2002
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
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Minneapolis, MN 55402

EXAMINER

PHAM, LONG

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,743

Applicant(s)

RHODES, HOWARD E.

Examiner

Long Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 9, 10, 17, 18, 36, 38 and 45-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9, 10, 17, 18, 36, 38 and 45-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
2. Claims 1-4, 5-6, 9-10, 17-18, 36, 45, 46, 47, 48, 49, and 50-55 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The original disclosure does not teach forming a gate structure or dual gate structure using only one mask as recited in present claims 1, 5, 9, 17, and 36. The original disclosure only provides the teaching for forming **a gate layer** forming **a gate or a gate structure**. Note that a gate layer must be patterned using additional masks to form a gate or gate structure.
3. Claim 56 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The original disclosure does not teach forming the first gate structure including only blanket implants.
4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-4, 5-6, 9-10, 17-18, 36, 38, 45, 46, 47, 48, 49, 50-55, and 56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 5, 9, 17, 36, and 56 it is unclear how a gate or a gate structure is formed using only one mask.

In claim 36, line 3 and claim 38, line 3, it is unclear how the gate structure including the N well is formed if the N well is being masked. It appears that "N WELL regions" should "P WELL regions".

In claim 56, line 3, it is unclear how the first gate structure including only blanket implants is formed.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 3, as written, taught, and understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Liu (US '861).

Liu teaches a method comprising (see figures 1-6 and col. 1, line 20 to col. 4, line 35):

preparing a substrate 10, wherein preparing a substrate, comprising: forming a gate oxide layer 18; and forming a polysilicon layer 20; and

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (US '861) as applied to claims 1 and 3 above, and further in view of Gardner et al. (US '471).

Liu further teaches forming a first gate structure having a first conductivity in the substrate, the first gate structure is being formed by an in-situ process, and forming a second gate structure having a second conductivity in the substrate, the second conductivity having a different value than the first conductivity, and the second gate structure being formed using only one masking operation.

However, Liu fails to teach the first gate structure is formed by one blanket implantation as recited in present claim 4.

Gardner teaches a method for forming a CMOS device in which a doped polysilicon layer for forming gate structures is formed by blanket implantation. See figure 1A and col. 5, lines 25-40.

It would have been obvious to ***one of ordinary skill in the art of making semiconductor devices*** form the first gate structure by blanket implantation because in doing so the use of masking is avoided.

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Liu fails to teach forming a sacrificial oxide layer on a semiconductor as recited in present claim 2.

However, the formation of a sacrificial oxide layer on a semiconductor is well-known to *one of ordinary skill in the art of making semiconductor devices*.

Response to Arguments

10. Applicant's arguments filed 09/03/02 have been fully considered but they are not persuasive. See below.

In response to the applicant's arguments in the bottom paragraph on page 3 of the amendment dated 09/03/02, it is submitted that the layer 420 in figures 4A-4C is not a gate structure but a layer for forming the gate structure.

In response to the applicant's arguments in the first and second paragraphs on page 4 of the amendment dated 09/03/02, it is submitted that claims 1, 5, 9, 17 and 36 are indefinite because it is unclear how a gate or a structure is formed using only one mask. Further, it is submitted that claims 36 and 38 are indefinite because it is unclear how the gate structure including the N well is formed if the N well is being masked.

In response to the applicant's arguments in the bottom paragraph on page 4 of the amendment dated 09/03/02, it is submitted that the Liu patent has a filing of Dec 30, 1997 and the present application has a filing of Feb 13, 2001, therefore Liu patent qualifies as a prior art reference under 35 USC 102(b).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long Pham whose telephone number is 703-308-1092. The examiner can normally be reached on M-F, 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 703-308-4918. The fax

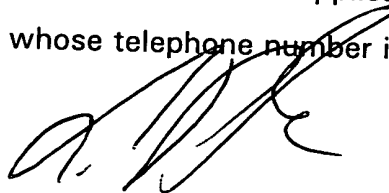
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phone numbers for the organization where this application or proceeding is assigned are 703-746-4082 for regular communications and 703-746-4082 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Long Pham

Primary Examiner

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L. P.

November 14, 2002